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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/820,130	04/08/2004	Shunpei Yamazaki	740756-2723	8630

22204 7590 10/24/2007  
NIXON PEABODY, LLP  
401 9TH STREET, NW  
SUITE 900  
WASHINGTON, DC 20004-2128

EXAMINER
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MOORE, KARLA A

ART UNIT	PAPER NUMBER
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1792

MAIL DATE	DELIVERY MODE
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10/24/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/820,130	<b>Applicant(s)</b> YAMAZAKI ET AL.	
	<b>Examiner</b> Karla Moore	<b>Art Unit</b> 1792	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 August 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 17-28 is/are pending in the application.
- 4a) Of the above claim(s) 4-7 and 23-28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 17-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 October 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 and 3 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,356,686 to Fujioka et al.
3. Fujioka et al. disclose a thin-sheet mask in Figures 3 and 5, comprising: a mask body (2) having a pattern opening; and a frame (1), wherein said mask body is fixed to said frame in a stretched state and said mask body is adhesively bonded (using adhesive 3 at 14) in a location coinciding with a line passing through a thermal expansion center in members (7) of said frame.
4. With respect to claim 3, said mask body is adhesively bonded to said frame with an adhesive material having heat resistance. All material have some heat resistance, even if it is low and/or minimal.

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fujioka et al. as applied to claims 1 and 3 above, in view of Japanese Patent No. 05341502A to Sekimoto et al.

8. Fujioka et al. disclose the apparatus substantially as claimed and as described above.

9. However, Fujioka et al. fail to teach the frame as having four corners with curvature.

10. Sekimoto et al. teach providing a mask frame comprising four corner with curvature for the purpose of forming a frame capable of uniformly forming an adhesive

layer at the inside face without generating a film breaking at the time of sticking the frame film and without damaging the mask at the time of repairing the frame (abstract).

11. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided a frame having four corners with curvature in Fujioka et al. in order to form a frame capable of uniformly forming an adhesive layer at the inside face without generating a film breaking at the time of sticking the frame film and without damaging the mask at the time of repairing the frame as taught by Sekimoto et al.

12. Claims 17, 19-20 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,356,686 to Fujioka et al. in view of U.S. Patent No. 6,475,287 to Clark.

13. Fujioka et al. disclose a thin-sheet mask in Figures 3 and 5, comprising: a mask body (2) having a pattern opening; and a frame (1), wherein said mask body is fixed to said frame in a stretched state and said mask body is adhesively bonded (using adhesive 3 at 14) in a location coinciding with a line passing through a thermal expansion center in members (7) of said frame.

14. Fujioka et al. fails to teach that the apparatus can also be used in a deposition apparatus wherein a material is evaporated from a deposition source and deposited over a substrate through said opening of said mask body.

15. Clark teaches using a mask and frame apparatus for the purpose of permitting selective deposition from a deposition source situated below the mask, frame and a deposition substrate (abstract).

16. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided the mask and frame apparatus of Fujioka in a deposition apparatus for the purpose of selectively depositing onto a deposition substrate as taught by Clark.

17. With respect to claims 19 and 22, said mask body is adhesively bonded to said frame with an adhesive material having heat resistance. All material have some heat resistance, even if it is low and/or minimal.

18. With respect to the specific material to be deposited, the courts have ruled that expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim. Ex parte Thibault, 164 USPQ 666, 667 (Bd. App. 1969).

19. Claims 18 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujioka et al. and Clark as applied to claims 17, 19-20 and 22 above, and further in view of Japanese Patent No. 05341502A to Sekimoto et al.

20. Fujioka et al. and Clark disclose the apparatus substantially as claimed and as described above.

21. However, Fujioka et al. and Clark fail to teach the frame as having four corners with curvature.

22. Sekimoto et al. teach providing a mask frame comprising four corner with curvature for the purpose of forming a frame capable of uniformly forming an adhesive layer at the inside face without generating a film breaking at the time of sticking the frame film and without damaging the mask at the time of repairing the frame (abstract).

23. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided a frame having four corners with curvature in Fujioka et al. and Clark in order to form a frame capable of uniformly forming an adhesive layer at the inside face without generating a film breaking at the time of sticking the frame film and without damaging the mask at the time of repairing the frame as taught by Sekimoto et al.

### ***Response to Arguments***

24. Applicant's arguments filed 17 August 2007 have been fully considered but they are not persuasive.

25. According to the teachings of Fujioka et al., locations at which the mask body and frame are adhesively bonded are where thermal expansion is concentrated, therefore, making them centers of thermal expansion. The locations at which the mask body and the frame are adhesively bonded are provided in the center of members (i.e. grooves, 7) in said frame, therefore, also allowing the locations to coincide with a line passing through a thermal expansion center in members of said frame. See for example, Figures 3 and 5 of Fujioka et al., as well as, column 1, rows 44-60; column 2, rows 33-52; and column 3, rows 22-27.

***Conclusion***

26. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

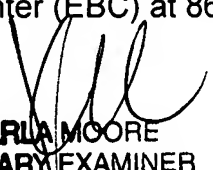
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karla Moore whose telephone number is 571.272.1440. The examiner can normally be reached on Monday-Friday, 8:30am-5:30pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on 571.272.1435. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For



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more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**KARLA MOORE**  
**PRIMARY EXAMINER**  
Art Unit 1763  
18 October 2007